are not available to viewers from the broadcast stations in their local markets. When college sports are offered on a "regionalized" basis, access to PrimeTime 24 also offers out-of-town college games that are not available to viewers from their local stations.

c. Ability to receive network programming without use of an antenna. Although over-the-air antennas are not particularly costly, purchasing and installing an antenna does involve a degree of trouble and expense. A subscription to distant network affiliates by satellite permits viewers to watch ABC, CBS, Fox, and NBC programming without making even the modest investment of time and money required to obtain an over-the-air antenna.

d. Digital format. Subscribers who receive distant network affiliates from Direct Broadcast Satellite services such as DirecTV and EchoStar receive network programming in a digital format, as opposed to the analog format in which television stations broadcast today.

None of these selling points have *anything* to do with living in an "unserved household." In a lawsuit pending in federal court in New York City, PrimeTime 24 itself has overtly admitted as much:

> Satellite delivery of network television programming is capable of providing consumers with many advantages over conventional over-the-air broadcasts, including a crystal-clear image and stereo sound. Moreover, by allowing consumers to view network stations other than their local station, satellite delivery of network television programming can and does enhance consumer choice. The availability of a distant network television station can provide several distinct advantages. For

> example . . . the non-network programming (e.g., local sports, news, and weather) on the distant station may be particularly desirable, or the network programming on the distant station may occur at a more convenient time than that offered by the local network station.[12/]

If they intended to comply with the Copyright Act, EchoStar and other satellite companies would have implemented objective standards to ensure that only true "unserved households" -- not served homes seeking to subscribe for other reasons -- could sign up for its service. Instead, EchoStar and other satellite companies signed up, and welcomed the business of, hundreds of thousands of plainly ineligible customers. Even if the Commission had the authority to do so -- which it does not -- it would scarcely be fair to reward EchoStar and other satellite companies for their egregious wrongdoing by changing the rules in their favor.

IV. THE MIAMI COURT USED ESSENTIALLY THE SAME MAPS THE COMMISSION HAS USED TO DETERMINE WHICH TV STATIONS "VIEWERS . . . CAN NOW RECEIVE OVER THE AIR"

Traditionally, the Commission has relied on predicted Grade B contours, created pursuant to Section 73.684, for a variety of regulatory purposes. Over the past few years, however, the Commission has recognized that terrain-adjusted propagation models -- and the Longley-Rice model in particular -- provide the best available method, short of field testing, for assessing the strength of signal that is available at a particular location. The Commission has set forth specific parameters (e.g., 50% location and time probability, 30 foot receiving antenna) for creation of Longley-Rice maps for analog television stations. The Court in Miami has simply incorporated

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12/ Complaint, ¶ 29, PrimeTime 24 Joint Venture v. National Broadcasting Company, Inc., 97 Civ. 3951 (S.D.N.Y. filed May 30, 1997).

the standard parameters from the relevant FCC technical publication, Office of Engineering and Technology Bulletin No. 69.

EchoStar's description of how the FCC has used Longley-Rice propagation model for regulatory purposes is highly misleading. Most importantly, EchoStar mischaracterizes the purposes for which the FCC has used Longley-Rice in predicting the signal coverage areas of television stations.

In a very similar context -- determining "[what] stations [viewers] can now receive over the air" -- the FCC used the same parameters that EchoStar now attacks.[13/] Specifically, in connection with the transition to digital television broadcasting, the FCC adopted the Longley-Rice Irregular Terrain Propagation Model as the best available way to determine the area that stations currently serve through analog broadcasting. In explaining its choice of Longley-Rice, the Commission pointed out that "the terrain dependent Longley-Rice propagation model . . . [is] well known to the broadcast industry," and then-Chairman Hundt referred to Longley-Rice as providing "even more precise calculations" about the areas served by local stations.[14/] In the digital replication proceeding, the FCC specifically rejected the use of proprietary software --

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13/ Sixth Report & Order, In Re Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, FCC 97-115, ¶ 29, 12 FCC Rcd. 14588, 14605 (released Apr. 21, 1997).

14/ FCC, In Re Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, MM Docket No. 87-268, FCC 98-24, at ¶ 180, 13 FCC Rcd. 7418 (released Feb. 23, 1998); Separate Statement of Reed Hundt, Chairman, FCC, In Re Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, 96-317, 11 FCC Rcd. 10968 (released Aug. 14, 1996).

such as the private "morphology" software that EchoStar now advocates be mandated -- as a substitute for the Longley-Rice program available from U.S. Government sources. FCC 98-24, at ¶ 180.

Contrary to EchoStar's repeated false statements, the Commission did not use Longley-Rice solely for purposes of avoiding interference among different stations. In fact, the Commission used Longley-Rice to replicate in the digital environment the areas that stations actually serve as analog broadcasters. As the Commission has explained, its purpose in using Longley-Rice with the standard OET Bulletin 69 parameters was to predict station coverage areas accurately so as to "ensure that *broadcasters have the ability to reach the audiences they now serve* and that *viewers have access to the stations that they can now receive over the air.*" Sixth Report & Order, In Re Advanced Television Stations and Their Impact Upon the Existing Television Broadcast Service, FCC 97-115, ¶ 29, 12 FCC Rcd. 14588, 14605 (1997) (emphasis added); see id. at 14630 (replication process "will preserve both *viewers' access to the existing stations in their market* and *stations' access to their existing populations of viewers*") (emphasis added). The purposes of the Commission's replication process were thus essentially the same as those at issue here.

V. THE COMMISSION HAS NO AUTHORITY TO ACT ON ECHOSTAR'S SUGGESTION THAT THE COMMISSION (AT SOME LATER TIME) MODIFY THE DEFINITION OF GRADE B INTENSITY

EchoStar's main proposals in its Petition do not involve any change in the definition of the statutory term "Grade B intensity." Rather, EchoStar asks the Commission to consider

adopting regulations about how to predict whether Grade B intensity is present at a particular location, and about how to measure whether a particular household is capable of receiving a signal of Grade B intensity. EchoStar Pet. at 22-29. We discuss the latter two points in detail below.

Although EchoStar does not ask the Commission to take any immediate action to redefine the meaning of the term "Grade B intensity," it does half-heartedly suggest that the FCC should someday modify the definition of Grade B intensity to take into account "multipath interference." EchoStar Pet. at iii n.3. For two reasons, the Commission lacks authority to take such a step. First, Congress adopted a specific definition of "Grade B intensity" as part of Section 119 in 1988, and the Commission cannot change the meaning of a federal statute by any action it takes now. Second, as recognized by broadcast engineers for both broadcasters and satellite carriers, the issue of "multipath interference" (sometimes called ghosting) is not related to signal intensity.

A. Congress Adopted the Specific Definition of Grade B Intensity in Force In 1988, and the FCC Cannot Change the Meaning of Section 119 By Any Action It Takes Today

When Congress enacted the Satellite Home Viewer Act in 1988, it defined an "unserved household," for purposes of the Act, as one that was unable to receive "through the use of a conventional outdoor rooftop receiving antenna, an over-the-air signal of grade B intensity (as defined by the Federal Communications Commission) of a primary network station affiliated with that network." See 17 U.S.C. § 119(d)(10) (emphasis added). Congress explicitly

identified the particular existing regulation it was adopting (47 C.F.R. § 73.683), see H.R. Rep. 100-887, at 26 (1988).[15/]

Notably, Congress did not ask the Commission to engage in any rulemaking about Grade B intensity, or delegate any authority to the Commission to redefine that standard as incorporated in the Satellite Home Viewer Act. By contrast, Congress did direct the FCC to conduct an inquiry on another issue -- whether satellite companies could feasibly provide syndicated exclusivity protection. Since Congress did not authorize the FCC to engage in any rulemaking relating to this matter, and since two courts have found that there is nothing ambiguous about the standard adopted by Congress, see CBS Inc. v. PrimeTime 24, May 13 Order at 13-17; ABC, Inc. v. PrimeTime 24, July 16 Order at 10-19, there is no basis for the Commission to seek at this late date to alter the meaning of a statute that has been in force for a decade.[16/]

Instead of delegating any rulemaking authority to the FCC, Congress specifically adopted the FCC's then-existing recitation of "Grade B" signal strengths -- e.g., 47 dBu as the "Grade B" minimum signal strength for Channels 2-6. Because Congress adopted a specific, existing regulation -- rather than simply making some general reference to another body of law -- any

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[15/] Congress stated that the term "Grade B intensity" was "defined by the FCC, currently in 47 C.F.R. section 73.683(a)." H.R. Rep. 100-887, pt. 1, at 26 (1988). As the context makes clear, Congress used the term "currently" because the location where the definition is codified might change, not to grant any new authority to the Commission.

[16/] That is, this is not a case in which Congress has expressly left a "gap" for an agency to fill with new regulations. Compare National Fuel Gas Supply Corp. v. FERC, 811 F.2d 1563, 1569 (D.C. Cir.), cert. denied, 484 U.S. 869 (1987).

subsequent amendment by the Commission to the definition adopted by Congress would have no impact on the meaning of "Grade B intensity" as adopted by Congress.[17]

The fact that Congress was adopting a specific, well-known administrative regulation, rather than a specific statute, makes no difference to the analysis: the point of the cases described above is that specific incorporations from another body of law are not changed by subsequent changes in the adopted body of law. None of the cases cited by EchoStar is to the contrary.[18] Because Congress unambiguously adopted a specific, existing standard as the way to balance two competing interests, and did not grant any authority to the Commission to alter that

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[17] See, e.g., Hassett v. Welch, 303 U.S. 303, 314 (1938) (stating the "well settled canon" that "'[w]here one statute adopts the particular provisions of another by a specific and descriptive reference to the statute or provisions adopted, . . . [s]uch adoption takes the statute as it exists at the time of adoption and does not include subsequent additions or modifications by the statute so taken unless it does so by express intent.'") (quoting Sutherland Stat. Constr. (2d ed.) at 787-88) (emphasis added); Curtis Ambulance of Florida, Inc. v. Board of County Commissioners of Shawnee County, 811 F.2d 1371, 1378 (10th Cir. 1987) (same); Bexar County Criminal District Attorney's Office v. Mayo, 773 S.W.2d 643, 643-44 (Tex. Ct. App. 1989) ("Where one statute incorporates another by reference, and the one incorporated is thereafter amended or repealed, the scope of the incorporating statute remains intact."); Sutherland Stat. Constr. § 51.08 (5th ed.) ("A statute of specific reference incorporates the provisions referred to from the statute as of the time of adoption without subsequent amendments, unless the legislature has expressly or by strong implication shown its intention to incorporate subsequent amendments within the statute.") (emphasis added).

[18] In Lukhard v. Reed, 481 U.S. 368, 379 (1987), for example, Congress had simply used a completely undefined term -- "income" -- without indicating any specific source for defining that term, much less specifying a particular existing regulation. And Helvering v. Wilshire Oil Co., 308 U.S. 90 (1939), addresses a different argument -- the effect of re-enactment of a statute. Here, the point is that when it was first enacted, Congress carefully and explicitly incorporated a specific existing FCC regulation. As the cases above make clear, that type of incorporation by reference is not affected by subsequent changes in the incorporated provision.

balance, the Commission is without power to take the radical steps demanded by EchoStar. See Southwestern Bell Corp. v. FCC, 43 F.3d 1515, 1520 (D.C. Cir. 1994).

B. The Particular Change in the Definition of "Grade B Intensity" Suggested by EchoStar Makes No Sense

EchoStar's suggested future alteration in the definition of "Grade B intensity" fails for a second reason as well. EchoStar's suggestion is that the Commission someday consider changing the definition of Grade B intensity itself to deal with the problem of "multipath interference" or ghosting. But as any broadcast engineer will acknowledge, interference and ghosting are not a matter of signal intensity. Since the term "Grade B intensity" clearly refers to an objective measure of "intensity," EchoStar's proposal is a nonstarter.

VI. THERE IS NO BASIS FOR ECHOSTAR'S PROPOSAL TO RELY ON RADICALLY TRUNCATED LONGLEY-RICE PROPAGATION MAPS

A. The Miami Court Has Used Longley-Rice Maps Only As a Way to Permit Satellite Companies to Serve Households as to which the Companies Have Not Met Their Statutory Burden of Proof

As discussed above, to meet their burden of proof that a particular household is unserved, a satellite carrier must conduct a signal intensity test at each subscriber's home. See Memorandum Opinion at 13-18, ABC, Inc. v. PrimeTime 24 (July 16, 1998). The CBS court in Miami could thus lawfully have limited PrimeTime 24 to serving only subscribers as to which it had met its burden of proof by performing a signal intensity test. Instead, the Miami court bent over backwards to allow PrimeTime 24 and its distributors to serve subscribers that it had not

tested -- and as to which it had therefore not met its burden of proof. It is in that context -- the discretionary fashioning of relief by a federal court against a defendant that has engaged in massive copyright infringements -- that the Court has used Longley-Rice maps. In making that discretionary judgment, the Court took into account a mountain of empirical evidence showing that Longley-Rice, run in the standard method specified by the Commission, is an excellent predictor of actual signal intensity.[19/]

The FCC obviously cannot dictate to a federal Court how it may exercise its broad discretion in crafting injunctive relief under the Copyright Act against a copyright infringer. Accodingly, the exercise that EchoStar urges the Commission to conduct would have no point.

B. EchoStar's Claim that Standard Longley-Rice Maps Overpredict Actual Availability of Signals is Fallacious

EchoStar contends that running Longley-Rice in the standard way approved by the Commission in OET Bulletin 69 will mean that "large percentages of those who cannot receive a Grade B signal will fall within the 'prohibited area.'" EchoStar Pet. at 25. EchoStar offers no data whatsoever to support this claim, which is patently fallacious.

As EchoStar well knows, the 50/50 probabilities for running Longley-Rice apply only at the extreme outer edge of the Longley-Rice coverage area -- where relatively few people live.

19/ The Longley-Rice maps do not stop at the traditional Grade B contours because the statutory test is whether a particular household can receive a signal of Grade B intensity, which is best addressed by Longley-Rice maps that are not constrained by the admittedly inaccurate traditional FCC contours. In most cases, of course, Longley-Rice maps reflect propagation smaller than is predicted by the traditional FCC method.

Both the time and location probabilities for receiving a signal of Grade B intensity are much higher closer to the transmitter. Among locations predicted to receive a Grade A signal, for example, more than 70% of locations are predicted to receive a signal of at least Grade B intensity at least 90% of the time.

Because most people do not live at the extreme outer edge of the Longley-Rice predicted Grade B coverage area, it is plainly wrong to assert that 50% of the households predicted to receive a signal of Grade B intensity will be unable to receive such a signal. And not surprisingly, although the satellite industry has had years to develop such data, EchoStar provides no empirical basis whatsoever for its sky-is-falling claims. It would be a mistake even to begin a rulemaking proceeding, much less to make radical policy changes, based on factual claims for which the proponents have zero empirical support -- and for which there is massive contrary evidence, as discussed below.

C. Actual Test Results Show that Longley-Rice, Run in the Standard Manner, is An Excellent Predictor of Signal Intensity

Unlike satellite carriers, broadcasters have conducted empirical research to test the accuracy of Longley-Rice in predicting the results of actual signal intensity tests. For example, in Charlotte, North Carolina -- a market specifically identified by PrimeTime 24 as a typical American television market -- Longley-Rice was 99% accurate in predicting the results of actual signal intensity tests conducted near the homes of more than 100 randomly selected subscribers. See Supplemental Expert Report of Jules Cohen, May 29, 1998, ¶¶ 14-16. Similarly, in Baltimore, Raleigh, and Miami, the accuracy of Longley-Rice in predicting actual signal

intensity measurements was 94%, 99%, and 100%. See Supplemental Report of Jules Cohen, ¶ 32.[20] These data devastatingly refute EchoStar's groundless suggestion that half of all television households will be "disenfranchised" by use of the standard version of Longley-Rice.

D. Use of "99%" Factors in Running Longley-Rice Is Improper for Technical Reasons

Use of "99%" factors is also improper for an entirely separate technical reason. As broadcast engineer Jules Cohen explains, engineers generally do not use extremely high location and time factors in applying Longley-Rice because those extreme factors distort prediction results. See Supplemental Report of Jules Cohen, ¶ 12 n.4 (May 29, 1998). At variabilities above 90% and below 10%, the "log normal" distribution of variabilities breaks down. Id.

VII. ECHOSTAR'S PROPOSAL TO USE INSIDE MEASUREMENTS FROM UNKNOWN EQUIPMENT TO MEASURE OUTDOOR FIELD INTENSITY IS FLATLY INCONSISTENT WITH THE STATUTE

The SHVA says that a household is eligible to receive a distant network signal only if, among other things, it "cannot receive through the use of a conventional outdoor rooftop receiving antenna, an over-the-air signal of Grade B intensity." 17 U.S.C. § 119(d)(10)(B) (emphasis added). "Grade B intensity," in turn, refers to certain "dBu" levels, which are measurements of ambient signal intensity in the air. See 47 C.F.R. § 73.683(a); CBS Inc. v. PrimeTime 24, May 13 Order at 2-3; ABC, Inc. v. PrimeTime 24, July 16 Order at 11-13.

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[20] To test an extreme "worst case," Mr. Cohen also arranged for testing of randomly selected subscribers with respect to a UHF station in Pittsburgh, a market with extremely difficult terrain. Even in this worst-case situation, the accuracy of Longley-Rice was high.

Congress thus determined that the pertinent location for measuring the level of dBu's is in the vicinity of the rooftop, not inside the house.

EchoStar urges the Commission to adopt a new set of procedures for measuring signal intensity to replace the standard measurement procedures of 47 C.F.R. § 73.686, which broadcast engineers have relied on for decades. EchoStar's proposals are completely inconsistent with the statute, and should be rejected.

EchoStar buries the most fundamental proposed change: to "measure intensity at the [household's] television set," EchoStar Pet. at 29, rather than measuring signal intensity using a known, properly functioning antenna. But it is simply not possible to use a household's own antenna/cable/television setup to measure the signal intensity above the rooftop. Most obviously, the household may, like most households, not even have a rooftop antenna. And even for those households that do have rooftop antennas, it is impossible to use a homeowner's own (uncalibrated) equipment to measure signal intensity in the air above the rooftop.

The reason is simple: to use a particular antenna system to measure signal intensity in the vicinity of the antenna, it is essential to know all of the characteristics of the antenna/cable hookup, including the gain of the antenna and the amount of any signal losses along the transmission line. Here, for example, is the sworn testimony of a satellite industry engineering expert, Richard Biby, on this point:

> Q. When you're measuring signal strength, what you literally do is to measure the voltage at the bottom of a transmission line from an antenna?

A. That's exactly correct.

Q. In order to calculate what the signal strength is in the air, you need to know the characteristics of your antenna and transmission line.

A. That's correct.

Q. If you do not know those characteristics, then you cannot reason from the voltage at the bottom of the transmission line to the signal intensity in the air; is that correct?

A. That is correct.

Deposition of Richard Biby [expert for PrimeTime 24], June 10, 1998, at 63 (emphasis added).

EchoStar's proposal to use the household's own equipment to measure outdoor signal intensity -- no matter how decrepit or poorly assembled that equipment may be -- is thus a nonstarter.

EchoStar also proposes a variety of other measures calculated to under-report the actual signal intensity available in the vicinity of its subscribers' rooftops. First, EchoStar advocates doing testing at an antenna height lower than 30 feet. But many homeowners have antennas higher than 30 feet; the reported antenna heights for homes selected by PrimeTime 24 in Fresno, California were 25 feet, 28 feet, 30 feet, 35 feet, and 45 feet, for an average of 32.6 feet. The Commission presumably chose 30 feet as a reasonable approximation of the height of typical homeowner antennas. The considerations of administrative simplicity that led to the selection of that average height apply with full force today.

Second, EchoStar proposes that the antenna to be pointed away from the station in question, unless it happens to be the station that the household claims to view the most. Echostar Pet. at 29. That is absurd: as a senior engineer at a broadcast engineering firm retained by PrimeTime 24, Hammett & Edison, has specifically stated: "I think it reasonable for [the station] to expect homeowners to orient their antennas properly."[21/] Since the statute treats as "unserved" only those households that "cannot" receive a signal of Grade B intensity, it would be folly to treat someone as unserved who can receive a strong signal simply by orienting his or her antenna properly.

VIII. TO FOSTER LAWFUL COMPETITION BETWEEN CABLE AND SATELLITE, THE COMMISSION SHOULD ENCOURAGE ENACTMENT OF AN APPROPRIATE REGULATORY REGIME FOR LOCAL-TO-LOCAL SATELLITE TRANSMISSIONS OF BROADCAST STATIONS

It is obviously improper for satellite companies to seek to "compete" with cable systems by violating the Copyright Act and jeopardizing the viability of local over-the-air stations. Indeed, this type of "competition through infringement" gives a huge and unfair regulatory advantage to satellite companies over cable companies: satellite companies (unlike cable) have no obligation to carry local stations, but they can (unlike cable) deliver distant network affiliates (unlawfully) to their customers.

If Congress and the Commission create an appropriate statutory and regulatory regime, however, satellite companies will be able to compete with cable systems by offering local

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21/ Correspondence from W. Hammett to R. Weller, dated Feb. 4, 1998

broadcast stations -- not distant ones -- to local viewers, just as cable systems do. The local-to-local solution, if properly implemented, is a win/win situation for satellite companies, broadcasters, and consumers. We urge the Commission to lend its strong support to adoption of an appropriate local-to-local regime.

Conclusion

For the foregoing reasons, the Commission should dismiss EchoStar's ill-conceived petition.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 25th day of September, 1998, I caused copies of the foregoing pleading to be served by hand delivery or by first-class mail on the following:

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